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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,894	10/29/2001	Jose Roberto Alvarez	60705-1850	1444

7590 06/18/2004

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EXAMINER
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SEFI, BEHROOZ M

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 06/18/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/045,894

Applicant(s)

ALVAREZ ET AL.

Examiner

Behrooz Senfi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 6,037,986) in view of Taubman (US 6,381,279).

Regarding claims 1 – 2, Zhang '986 teaches the claimed "reducing noise prior to video encoding" (i.e. fig. 3, abstract), and the claimed "filtering ....." (i.e. fig. 3, filters 32, 34 and 36), and "motion estimation unit and determining a first reference region ....." (i.e. figs. 3, 4 and 7, motion detection 44, col. 2, lines 10+, col. 3, lines 29+). Zhang '986 also teaches, "average pel difference and frames are weighted and current frame receive more weight than the previous frame" (i.e. col. 9, lines 1 – 15, and col. 11, lines 1 – 10), but fails to explicitly teach, "compute weighted average". However, such features are well known and used in the prior art of the record as evidenced by Taubman '279 (col. 11, lines 65 – 67) where teaches computing the weighted average of the fields and comparing the averages. Therefore, taking the combined teaching of Zhang '986 and Taubman '279 as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to use the teaching of Taubman and take the

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weighted average of the fields which would improve/enhance the quality of the image.

Regarding claims 13, 25, the limitations claimed are substantially similar to claims 1 – 2, therefore the grounds for rejecting claims 1 – 2 also applies here.

Regarding claims 3, 15 and 27, combination of Zhang '986 and Taubman '279 teach, "step of dynamically changing the value of the weighted average in accordance with each new current field", reads on Zhang '986 (i.e. fig. 3, out put of 42, which dynamically controls/change the values).

Regarding claims 4, 16 and 28, combination of Zhang '986 and Taubman '279 teach, the claimed "brightness and color of pixels" (i.e. col. 2, lines 55 – 58 of Zhang, and col. 2, lines 14 – 16 of Taubman).

Regarding claims 5, 14 and 26, combination of Zhang '986 and Taubman '279 teach, "encoding unit for encoding the video data after reducing the noise" (i.e. col. 3, lines 21 – 25 of Zhang).

Regarding claims 6, 7, 18, 19, 30 and 31, combination of Zhang '986 and Taubman '279 teach, "weighted average being weighted more toward the current field" (i.e. col. 11, lines 8 – 9 of Zhang).

Regarding claims 4, 8, 16, 20, 28 and 32, combination of Zhang '986 and Taubman '279 teach, the claimed "brightness and color of pixels" (i.e. col. 2, lines 55 – 58 of Zhang, and col. 2, lines 14 – 16 of Taubman).

Regarding 9, 21 and 33, combination of Zhang '986 and Taubman '279 teach, "determining amount of video motion and modify weighted average" (i.e. fig. 3, 44 of Zhang).

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Regarding claims 10 - 12, 22 - 24 and 34 - 36, combination of Zhang '986 and Taubman '279 teach, "determining a sum absolute pixel difference" (i.e. col. 11, lines 57 - 58 of Zhang).

Regarding claims 17 and 29, combination of Zhang '986 and Taubman '279 teach, "removing impulsive noise" (i.e. col. 9, lines 39 - 40 of Zhang).

**Conclusion**

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(703)305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(703)305-4856**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**

**(703) 872-9314**

Hand-delivered responses should be brought to Crystal Park II, 2121

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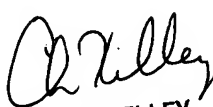
Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. S.

6/11/2004

  
CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600